Research on the Internet-based Cultural Tourism Transformation Strategy

—Taking the "Digital Palace Museum" Online Program as an Example

Yunqian Yi

Economic and Trade College, Shandong Management University, Jinan, China
yiyunqian@126.com

Keywords: Cultural tourism, Innovation transformation, "Internet plus", "Digital Palace Museum"

Abstract: The concept of "Internet plus" has accelerated the deep integration of digital technology and economic and social fields. Viewing from the aspects of policy, economy, society, and technology, cultural tourism has ushered in a golden period of online development as a new bright spot in the development of tourism. With the help of the Internet platform, a three-dimensional cultural space for online and offline interaction is created, it has become the best choice for the transformation and upgrading of cultural tourism and for the enhancing of user experience. This paper takes the "digital palace museum" online program as an example to deeply analyze the content innovation, channel innovation, and market innovation strategies of the Palace Museum in the "Internet plus" practice, aiming to provide reference for other units within the industry.

1. Introduction

The cultural tourism is a tourism industry developed on the basis of human resources. It is a new cross-border integration model to meet people's cultural tourism consumption needs. With the continuous development of economy and society and the improvement of people's living standards, a single sightseeing tour has been moving towards the development of multicultural themed tours and experience tours, and the cultural tourism market has gradually taken shape [1]. However, there is clearly a problem of inadequate development imbalance in the current cultural tourism. Cultural tourism depends heavily on the conditions of endowment in different regions, and the development of regional differences is obvious. In many regions, cultural tourism has a low degree of informatization, with over-reliance on tickets and travel agencies, and lack of active service awareness. At the same time, the experience of cultural tourism in the accommodation and entertainment links still has tremendous room for improvement. For example, long queue tickets, single product forms, high

value-added services and inconvenient tour guides are difficult to find a solution simply by changing the traditional offline mode. Faced with the two historical opportunities of "Internet plus" and "supply-side reform", the offline consumption pattern of cultural tourism is shifting to the mobile internet model. Within the foreseeable 5-10 years, the Internet will run through the entire process of cultural tourism.

From the literature collected in this field, the existing theoretical research focuses on the single industry of Internet plus culture or tourism. The content is mostly a reflection of business models and development strategies, with few case studies of Internet plus cultural tourism, and it is difficult to provide more specific practical guidance for the innovation transformation of cultural tourism. In the 20 years of informationization construction, the National Palace Museum successfully explored a new way of online and offline "Internet plus" model, and gradually shaped the social image of the "digital palace museum". Behind it, it must contain advanced technologies, development strategy and guiding ideology. Therefore, this paper attempts to use the "digital palace museum" online program as an example to explore its "Internet plus" practice, combing out the market strategies that should be followed in the process of cultural tourism innovation transformation, and providing guidance for the transformation and upgrading of the industry.

2. PEST Analysis of Online Development of Cultural Tourism

The cultural tourism with its rich content provides a lot of materials for the development of Internet platform content. At present, cultural tourism urgently needs the Internet as the carrier to expand the dissemination and consumption of cultural tourism products. At the same time, integrate online and offline resources will allow consumers to gain a deeper participation in the travel experience and achieve transformation and breakthrough in the new normal economy. At this stage, whether national industrial policy, economic and social development, or the Internet technology application capabilities all have provided strong support for the transformation and upgrading of cultural tourism [2].

2.1 Policy factors.

Cultural tourism is a "green sunrise industry" that is prioritized by countries in the era of low-carbon economy. It has inherent innovation leadership and openness, and policy dividends are continuously released. According to public statistics, at least seven national-level documents have specifically formulated cultural tourism-related support policies in the past four years, which have had a profound impact on the transformation and upgrading of cultural tourism and the improvement of quality and efficiency. In December 2016, the State Council for the first time listed the Thirteenth Five-Year Tourism Development Plan as a national key special plan, supporting Internet travel companies to integrate upstream, downstream and parallel corporate resources, elements and technologies to promote "Internet plus tourism". At the end of the 13th Five-Year Plan, it is required that free Wi-Fi, smart guides, electronic explanations, on-line booking, and information-pulling coverage be completed for the 4A level or above area [3]. In February 2017, seven departments including the National Development and Reform Commission, the Ministry of Culture, and the National Tourism Administration jointly issued the Implementation Plan of the Cultural Tourism Promotion Project during the 13th Five-Year Plan. A total of 1,478 projects in 33 provinces, municipalities, and autonomous regions were listed in the Thirteenth Five-Year Plan for Cultural Tourism Promotion Project Library [4] (see Figure 1), marking a golden opportunity for cultural tourism.
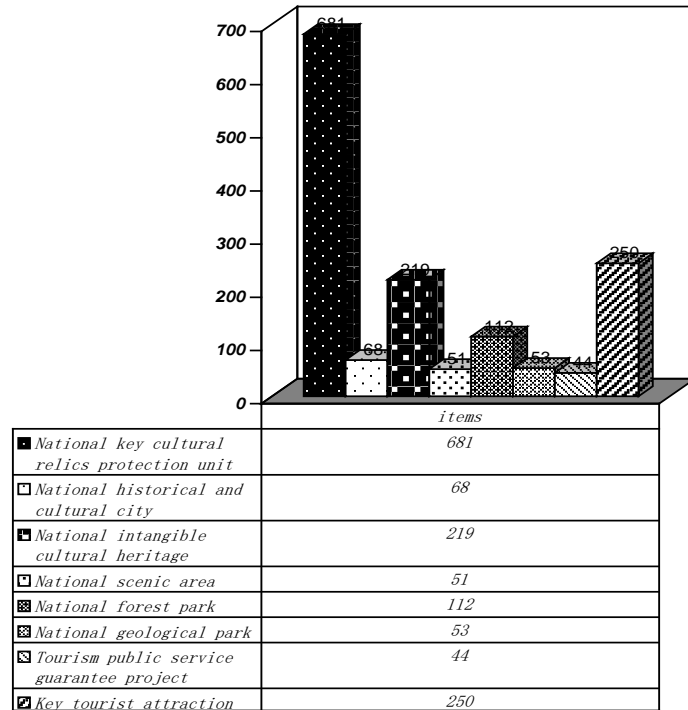
items	
■ National key cultural relics protection unit	681
☐ National historical and cultural city	68
⊞ National intangible cultural heritage	219
☐ National scenic area	51
▦ National forest park	112
▨ National geological park	53
◩ Tourism public service guarantee project	44
▨ Key tourist attraction	250

Figure1 The 13th Five-Year Plan for Implementing Cultural Tourism Improvement Project.

2.2 Economic factors.

During the "Twelfth Five-Year Plan" period, the income of urban and rural residents climbed steadily, and infrastructure construction such as high-speed railways, highways, and airports advanced rapidly, providing strong support for the overall development of tourism, and tourism consumption was quickly released. According to statistics from the National Tourism Administration, in 2016, domestic tourism reached 4.44 billion person-times and the income was 3.94 trillion yuan. Both the number of tourists and tourism consumption ranked first in the world. Inbound tourism reached 138 million person-times, making it the fourth largest inbound tourism reception country in the world. Forty years after the reform and opening up, China has truly entered the "mass tourism" era. With the help of the Internet, tourism products have also become a new target for people to purchase daily. According to data from CNNIC and Yixin, as of June 2017, the number of Internet users who have booked online travel and hotel and other travel products reached 334 million [5]. On the "November 11" online shopping festival in 2017, Ctrip, Jiahua Travel, Lvmama and other online travel websites also joined the promotion. Nearly half of netizens purchased travel products at a low price, 40% made it clear that they have travel plans in three months, and 60% were willing to spend less than 10,000 Yuan on travel. The above data shows that the tourism market has a strong demand and is increasingly becoming a new bright spot for economic development.

2.3 Social factors.

According to statistics released by CNNIC (China Internet Network Information Center), as of June 2017, the number of Chinese netizens was 751 million, and the Internet penetration rate was 54.3%, of which mobile phone users were 724 million. Internet users aged 10-39 accounted for 72.1% of the total, of which netizens in the 20-29 age group accounted for the highest, accounting for

29.7%. The monthly income was highest among the groups with 3001-5000 Yuan, which was 22.9% [5]. From the above data, the Internet industry has a large and stable user base, and a steady stream of consumers has become an important force to promote China's economic and social development. With the rapid development of the Internet, mainstream consumer groups represented by the post-90s are active on the mobile Internet, and traditional lifestyles and modes of thinking have been changed. Although cultural tourism is a typical offline experience economy, it is indispensable for users to search for information and search for Raiders through the Internet anytime, anywhere. With the upgrading of consumer concepts and the establishment of cultural self-confidence, users began to refuse simple copying and imitation. The demand for local original cultural products has become extremely strong, and more attention has been paid to whether the content provided by the Internet platform is valuable and whether the form has innovation.

2.4 Technical factors.

The Internet industry is one of the most active areas for technological innovation and the most widely used technology. All industries have used informatization, Internet of things, artificial intelligence and other technologies to achieve industrial transformation and upgrading. Especially in recent years, technologies such as mobile internet, VR, and live broadcast have matured, showing strong application capabilities and providing more expressions for the online development of cultural tourism. The WeChat public platform can integrate rich cultural tourism resources to allow people to view the content of concern anytime, anywhere. The application of virtual reality, holographic projection, and high-precision motion capture equipment can make people have more immersive participation and three-dimensional interactive experience. Mobile network and smart phone technologies can achieve a smooth video experience and create a short video and live broadcast industry. In short, in the age of the Internet, IT technology is not the limiting factor of application. The key is how to use IT tools to achieve content innovation and model innovation. In the future, there will be more and more applications based on the Internet technology.

3. Research Methods

Under the new normal economy, the Internet has become an important engine for innovation transformation in traditional industries. Therefore, how to use the advantages of offline resources to lay out online channels has become an important issue for cultural tourism, and has led to many practices. Considering that the cultural transformation innovation transformation strategy is difficult to observe in the hidden process, this paper chooses a single case study method, which not only applies to the exploration of this problem, but also has obvious advantages in the in-depth investigation of new phenomena and dynamic processes [6].

3.1 Case selection.

Beijing has more than 3,000 years of history and over 850 years of capital history. It is a world historical and cultural city and a national political and cultural center. It has a good research environment for cultural tourism. The Palace Museum in Beijing is one of the most visited and most well-known museums in the world. At the end of 2015, the "digital palace museum" online program was launched. With the Internet as the carrier, all aspects of its core culture were developed and integrated. Its products cover many fields such as film and television, publishing, amusement, culture and innovation, leading to major changes in the entire industry and becoming a typical paradigm in the current process of cultural tourism innovation transformation [7].

3.2 Data Collection.

In the research process of the "digital palace museum" online program, the following three channels were used to obtain the information and data needed for the research. The first is to gain experience through personal participation. The second is to keep track of the comments left by users on third-party platforms and social platforms, to establish contact with users and generate trust, to ask questions in the form of natural communication as possible, and to obtain first-hand information. The third is to collect information from the "digital palace museum" official platform, track media related reports, read relevant references, etc. and to obtain second-hand information. Data collection in three different channels follows the "evidence triangle" rule, which improves the accuracy and reliability of the research conclusions.

3.3 Possibility of copying and promotion.

The open sharing of the Internet platform reduces the market entry barrier. The mergers and acquisitions and integration of resources led by internet companies have accelerated and expanded to make up for the disadvantages of cultural tourism lacking internet thinking and professional operations talents in some regions. The individual units of cultural tourism are unique in their internal cultural resources and do not exacerbate market competition because of the duplication of individuals within the industry. The use of many strategies in the "Internet plus" field is similar. The above factors make cultural tourism based on its own cultural resources, making an objective analysis of the external environment, copying the "digital palace museum" online program development model, and achieving industrial innovation transformation.

4. Research Results and Analysis

Taking the "digital palace museum" online program as an example, this paper conducts an in-depth study on the content innovation, channel innovation and market innovation of cultural tourism under the "Internet plus" background. On the basis of case analysis and guided by theory, this paper summarizes the "Internet plus" innovation transformation strategy that can be used by the peers of cultural tourism.

4.1 Content innovation strategy.

The Internet economy has changed people's traditional lifestyles and thinking habits. Information and learning have become the norm through the Internet at any time and place. Therefore, the National Palace Museum digs deeply into the connotation of cultural heritage. The main innovative strategies adopted in content research and development are:

4.1.1 Create leading edge with massive content.

To create a leading edge in the Internet needs to produce massive amounts of content. Therefore, the Palace Museum focused on achieving diversification and large-scale contents when connecting public needs. Dig deeper historical and cultural elements and effectively gather their own cultural resources. A one-stop platform for cultural tourism with service sharing and perfect functions is established, providing online booking, panoramic virtual tours, information on the Forbidden City, museum activities, the Forbidden City shopping mall and other products and services. A large number of digitized works of cultural relics data was carried out, and 1.86 million pieces of 2,690 pieces were displayed on the Internet in graphic and textual form. It not only meets the needs of ordinary tourists

for basic knowledge, but also satisfies the needs of advanced knowledge for experts and scholars of relics and museology lovers and museum information system services. In the field of exhibitions and cultural creative fields, new projects have been created, such as the "National Palace Museum is a museum," "Going into the river map of the Qingming River," and "The Forbidden City beyond time and space". Combining with Internet technology, it breaks through the constraints of time and space, enables users to freely navigate in virtual scenes, and allows the public to see a richer "digital palace museum".

4.1.2 Integrate the advantages of the Internet to form a three-dimensional interactive cultural space.

The "digital palace museum" online program focuses on the latest concepts and technologies of Internet development, promotes online and offline integration, and creates a series of featured products and content. Let convenient services run through the entire process before, during and after the tour, enhancing the user experience and forming a three-dimensional interactive cultural space [8]. The major innovations include: providing shared live broadcasting of offline cultural events, resource on demand, opening up the "last mile" of digital cultural services; developing characteristic applications such as short videos and mini-games, realizing cultural popularization, and making higher added value of cultural tourism; providing convenient services for online booking of tickets, online payment, and direct access to ID cards; developing experiential smart travel, providing digital maps with GPS, Wi-Fi, and Internet of Things technologies to enable private guides to accompany online presentations; using advanced technologies such as 3D and VR to showcase the precious cultural relics of the Forbidden City in interactive creative solutions, achieving a 360-degree full-view perspective; using multimedia means to achieve close and deep interaction between people and objects, increasing the participation of visitors; paying attention to the continuous interaction from online to offline, and frequently initiating various types of in-depth participation, interactive topics to increase user stickiness; encouraging visitors to share travel diaries and play experiences on social platforms such as Weibo and Wechat, and launching wider, more active, and more focused word-of-mouth marketing.

4.1.3 Cultivate cultural IP to achieve value-added content.

In the context of the overall upgrade of consumption, people are increasingly demanding quality, quality, and distinctive cultural tourism products. IP (Intellectual Property) represents personality and scarcity, and it is the core value of cultural tourism products. Therefore, the future development of cultural tourism should return to content and brand building, and use the advantages of internal resources to cultivate cultural IP [9]. The National Palace Museum digs into its own historical information and cultural values. On-line shopping malls have introduced cultural and creative products such as the Forbidden City dolls, court bead headphones, mobile phone cases, palace calendars, etc., which combine traditional culture with lifestyle products to gain widespread attention from the market, and the products were once out of stock. It can thus be seen that when cultural IP has a strong brand and market appeal, it can superimpose products and projects of any kind and have sustainable development capabilities in the market changes. The cultural tourism is very malleable and highly relevant to education, parent-child, entertainment and other markets. There is the possibility of continuously widening the borders of products and services. Using cultural IP to create diversified content, integrating various forms of micro-video, Internet social contact, popular science education, entertainment games, and cultural and creative product design, etc., to carry out joint online and offline development can change the cultural tourism in the past single Source of profit, to achieve continuous value-added content resources [10].

4.2 Channel innovation strategy.

The Palace Museum upholds the "Internet plus " concept of innovation, with the help of online channels not only breaking the limitations of time and space, but also achieving traffic import, user tracking and information integration. Moreover, it forms a complementary relationship with offline channels, enhances user experience, and stimulates market vitality. Specifically, the Palace Museum adopted a multi-channel transmission, multi-platform display, and multi-terminal push communication strategy [11] (see Table 1):

Table 1 Multi-channel marketing of digital palace museum

Channel	Platform	Content	Function
Palace Museum (Chinese, English, Youth Editions)	Official Web	Online ticket booking, panorama VR tour, information of the Palace Museum, museum activities, the National Palace Museum Shop, etc.	Provide integration and sharing of cultural tourism resources in the Forbidden City
The emperor's day, Palace Museum exhibition, etc.	Palace Museum App	Role-play, panorama tour, venue navigation, collection introduction, etc.	Popularization of cultural science to stimulate user interest and provide practical tools
Palace Museum Official flagship shop	Tmall	There are three flagship shops: Tickets, Publishing, and Cultural and Creative shops, providing corresponding product sales.	Experience the convenience of e-tickets, comprehensive display of publishing results, promote the sales of cultural and creative products
Palace Museum Taobao	Taobao	Palace dolls, lifestyle products, handbooks, court jewelry and other cultural and creative products	Provide varied and affordable cultural and creative products
National Palace Museum	Weibo	Planning activities such as I advertise for the Forbidden City, and Forbidden City In My Eye Network Painting Competition, etc.	Daily content release to understand user needs
Micro Forbidden City	WeChat public account	There are three sections for viewing, shopping, and gathering. The content is the same as that of the Palace Museum official website.	Provide integration and sharing of the cultural tourism resources of the mobile terminal
National Treasure	CCTV3	A large exploratory program to explore the story and history behind the cultural relics	Through the presentation of television, make the artifacts more lively

The first is to develop the official portal of the Palace Museum. Set internal focus on high-quality content, providing venue navigation, 3D panoramic tourism and other one-stop services, aiming to achieve integration and sharing of cultural tourism resources, form a total platform and main front for cultural tourism product promotion and marketing. Especially in the planning and development of English and youth editions, individualized designs for foreign groups and young groups have made

the official website more in line with the aesthetic and usage habits of different audiences. At the same time, it actively develops mobile applications for mobile devices to enrich product offerings in different scenarios;

The second is to find traffic portals and work closely with third-party platforms. Relying on Taobao, Tmall platform to open an official flagship store, providing online booking, sales of cultural and creative products. Provide shared live broadcasting, event booking and other special services via WeChat. Use Weibo to initiate topics and maintain two-way interaction with netizens, so that offline consumer experience can be timely feedback through the Internet platform;

The third is to break the industrial boundaries and cooperate with the television industry and video websites. Programs such as Masters in Forbidden City and National Treasure have received extensive attention and heated discussions on the Internet. They have also explored new models for the dissemination of cultural tourism products.

4.3 Market innovation strategy.

To create cultural tourism consumption content that meets the needs of online consumer groups, individual units in the industry must change the traditional way of thinking to accurately grasp the public consumption preferences and market development trends under the Internet economy [12]:

4.3.1 Popularization.

In the context of the fragmentation of leisure, the Internet market first advocated the "eyeball economy," and in the display of product content, it was changing from a text era to a graphic era and a micro-video era. The best protection for traditional culture is to cultivate an attractive market for it. Faced with the largest number of potential consumers on the Internet, the Palace Museum opened up cultural barriers and used a more lively form of packaging cultural products in a simple and easy-to-understand way. This stimulated public interest in serious topics.

4.3.2 Quality.

With the expansion of middle-income groups, the cultural tourism market has become a high place for consumption upgrades, and consumer demand for quality of cultural tourism products has been increasing. The Palace Museum has keenly captured this trend of consumption, using the advantage of a large angle of view and a high starting point for its development. It adheres to the high-end route in the construction of the Internet platform and content design, and has created a cultural tourism ecosystem that pays more attention to quality and experience.

4.3.3 Interactivity.

In the Internet economy, users have become active fans from simple audiences, and online interaction with users can get the most direct feedback. The Palace Museum adjusted its position and mentality in a timely manner, changed the communication method of one-way information transmission in the past, paid attention to the flexible use of the Internet language to narrow the distance with the user, and obtained continuous user participation and support.

4.4 Problems in the construction of "digital palace museum" and improvement strategies.

In the process of development of online and offline integration, some shortcomings in the innovation transformation of traditional enterprises have also been exposed. Taking the "digital palace museum" online program as an example, it is mainly expressed in the following aspects. The

cultural and creative products are mostly standardized products, and their individualization is insufficient. Although the application scenarios of VR technology are provided, the preparation steps of the interactive experience are tedious and there are certain operating technology thresholds. Due to the user's device, the picture may be stuck or even incompatible. The amount of material is large, the performance cannot be optimized, and the flashback affects the user experience. Operators are not skilled enough in the operation of Internet applications. Some of the copywriting is too professional and is not close to the Internet audience, and part of the content is not maintained and updated in a timely manner.

To achieve a better user experience, cultural tourism must establish Internet thinking and actively consider what services and experiences online users need.

4.5 Personalized development strategy.

Younger generations with Internet genes have gradually become mainstream consumer groups in the society. They are no longer satisfied with the purchase of standardized products. The mentality of these potential tourists seeking new ideas is even more pronounced, and the expectation of personalized customized products has increased. The cultural tourism is to provide more service items that meet the individualized exploration of consumers. A personalized "cultural tourism shopping cart" is formed online, allowing customized cultural and creative products and encouraging users to actively submit creative solutions.

4.6 Simplified development strategy.

According to the latest statistics from CNNIC, the proportion of netizens who currently use mobile phones to access the Internet has increased to 96.3%, which is much higher than the proportion of Internet access through desktops and laptops. The dominant position of the mobile Internet has been strengthened, while the mobile applications have presented fragmentation of sites, time and demand. In order to quickly obtain the attention of users, cultural tourism must provide Internet content that allows users to have a bright spot in the shortest time possible, design a more concise and friendly interface and processes, and ensure that users get a simple and smooth user experience.

5. Summary

The content creation, channel development and commercial application of the Palace Museum line has greatly expanded the speed and scope of the dissemination of cultural tourism products, gradually eliminated cultural barriers, enhanced market vitality, and stimulated the willingness of the mass cultural tourism to consume. "Internet plus" provides a model, and some of its problems exposed in development also provide a reference for the innovation transformation of cultural tourism peers.

The study of this paper also has some limitations. Although the innovative performance of selected cases in "Internet plus" has certain typicalness and representativeness, given that it is difficult to overcome obstacles in data acquisition and other aspects, coupled with the ever-changing innovation activities in the Internet field, the future needs to be further collected and adopted. Follow-up case studies are needed to verify the cultural tourism innovation and development strategies that have been summarized in this paper.

In short, during the "Thirteenth Five-Year Plan" period, China's cultural tourism is in a period of golden development while facing prominent imbalances, containing both huge business opportunities and many challenges. In this crucial period of adjustment, we must follow the trend and persist in using the "Internet plus" and "supply-side reforms" as the innovation-driven strategy to break the

problem of inadequate industrial development. In the innovation transformation process, we need to accurately grasp the market economy and consumer preferences under the Internet economy, relying on the offline entities and digging deeply into the historical and cultural connotations of the scenic spots; take the Internet as the carrier to innovate the contents and expressions of cultural tourism products, and look for effective integration paths for Internet plus cultural tourism in content development, channel construction and market operations. Form the three-dimensional online-offline interaction, the consumer experience of cultural tourism can be enhanced, furthermore, the transformation and upgrading under the new normal economy will be successfully achieved, creating a new situation in the cultural tourism industry.

Acknowledgement

References

[1]China Industry Research Network. In-depth research and development trend analysis of China's cultural tourism industry in 2017 [R]. http://www.cir.cn/5/51/WenHuaLvYouYeDeXianZhuangHeFaZha.html

[2] Huang F. R. (2015) Countermeasures and model innovation of the "Internet plus" cultural industry development. Statistics and Decisions, 24(4), 158-161.

[3]State Council. Circular of the State Council on Issuing the "Thirteenth Five-Year Plan" Tourism Development Plan [EB/OL]. Central People's Government Network of the People's Republic of China http://www.gov.cn/zhengce/content/2016-12/26/content_5152993.htm

[4] National Development and Reform Commission. Notice on Printing and Distributing the "Implementation Plan of the Cultural Tourism Promotion Project during the 13th Five-Year Plan"[EB/OL]. National Development and Reform Commission website of the People's Republic of China http://www.ndrc.gov.cn/zcfb/zcfbtz/201703/t20170307_840582.html

[5]China Internet Network Information Center. The 40th Statistical Report on Internet Development in China[EB/OL]. China Internet Network Information Center Website http://www.cnnic.cn/hlwfzyj/hlwxzbg/hlwtjbg/201708/P020170807351923262153.pdf

[6] Yang X. C. and Tu K. (2017) The Co-creation Mechanism of User Value in Travel Sharing——A case study based on Uber. Management World, (8), 154-169.

[7] Feng N. E. (2017) A Survey of the Concept and Practice of Digitalization in Museums: A Case Study of the Digital Palace Museum Community. The Palace Museum, (01), 108-123.

[8] Chen S. F. (2015) The New Trend of the Development of the Current Internet Cultural Industry. Hundred Schools in Arts, 4 (145), 46-49.

[9] Li M. W. (2017) Research on the Technology Drive and Path of the Fusion Development of "Internet plus Cultural Industry". Technology Economics & Management Research, (9), 107-111.

[10] Chen S. F., and Li Y. (2017) Industrial Change in the Cultural Industry and Business Model Innovation. Journal of Beijing Union University (Humanities and Social Sciences Edition), Vol. 15, No.2, Issue 56, 31-35.

[11] Chen S. F. and Hou J. Y. (2016) Challenges and Countermeasures of Internet Cultural Industry. Journal of Beijing Union University (Humanities and Social Sciences Edition), Vol. 14 No.2, Issue 52, 8-12.

[12] Hu B.(2015) Empirical Research on Information Behavior of Spatial Users in China's Public Culture and Demand for Cultural Services——A Survey of 10 Technology Museum Users. Library and Information, (02), 128-132.